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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,617	03/06/2002	Timothy D. Wodrich	007300-083	4973

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 01/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/090,617

Applicant(s)

WODRICH ET AL.

Examiner

Jason R Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

***Drawings***

1. The formal drawings were received on 3 November 2003. These drawings are acceptable.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderton et al ('941) in view of Revankar et al ('878). Anderton et al shows a track pin bushing 10 having a tubular body with a first end 20 and a second end 30, and an outer surface 50 and an inner surface 60. The inner surface 60 has an inner diameter defining the circumference of an axial bore, which extends from the first end 20 to the second end 30. The outer surface 50 includes a first outer diameter at the first and second end sections (20 and 30, respectively) and a second outer diameter at a middle section 40 located between the first and second end sections (20 and 30, respectively). The second outer diameter is greater than the first outer diameter.

Anderton et al does not specify that the track pin bushing is formed of an iron alloy and having a case-hardened section on its outer surface, which includes a wear-resistant coating metallurgically bonded in a groove formed in the outer surface. It is well known in the art for track pin bushings to be formed from an iron alloy due.

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Therefore, it would have been obvious to form the busing of Anderton et al from an iron alloy for the purpose of providing a strong and durable bushing.

Revankar et al teaches impregnating an iron alloy object 2 having a case-hardened outer surface with a wear-resistant coating 1 formed of a hard fused metal alloy containing at least 60% iron, cobalt, nickel, or alloys thereof (see Table 2 and claim 26). A groove is machined in the outer surface of the object 2 to expose a non-carburized layer of the iron alloy. The wear-resistant coating 1 is then metallurgically bonded to the non-carburized layer flush with the outer surface of the iron alloy object 2. The wear resistant coating has a thickness of approximately 1.5mm and may be as deep as 3mm (see column 5, lines 15-20).

Once the groove is formed in the case-hardened outer surface of the iron alloy object and exposes non-carburized iron, a slurry including a powder of the fusible hard metal alloy and polyvinyl alcohol is coated in the groove. The slurry is then dried and heated to fuse the hard metal alloy powder into a solid metal, and then cooled to ambient temperature, thus forming a metallurgical bond with the non-carburized layer exposed in the groove.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the track pin bushing of Anderton et al with a wear-resistance coating metallurgically bonded in a groove on the outer surface for the purpose of preventing undue wear between the track pin bushing and a sprocket wheel.

While Anderton et al as modified by Revankar et al does not specify the Vickers Hardness of the wear-resistant coating being greater than 950 HV, it would be obvious to one of ordinary skill in the art to form the coating from a metal alloy having a suitable hardness to resistant abrasion from contact with other metal parts, thus extending the service life of the bushing and reducing replacement costs.

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Jason R Bellinger  
Examiner  
Art Unit 3617



jrb



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